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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,405	08/15/2003	Yawei Ma	03-741	1497
7590	06/13/2005		EXAMINER	
A. Blair Hughes McDonnell Boehnen Hulbert & Berghoff 32nd Floor 300 S. Wacker Drive Chicago, IL 60606			LY, NGHI H	
			ART UNIT	PAPER NUMBER
			2686	
DATE MAILED: 06/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/642,405	MA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 August 2003.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6,11 and 13-19 is/are rejected.
- 7) Claim(s) 7-10 and 12 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 4-6, 11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 6,666,422) in view of Janninck et al (US 6,766,182).

Regarding claim 1, Lu teaches a rotating shaft comprises: a spindle provided at the center of the rotating shaft (see fig.2, item 70), a fixing member hitched on the spindle (see fig.2, item 10), a limit mechanism provided between the fixing member and the rotating member (see fig.2, item 27), which limits the rotary wing in the range of

rotating through 180 degrees clockwise or counterclockwise (see fig.5 and fig.7, item 10 can be rotated 180 degree).

Lu does not specifically disclose a rotary-wing type mobile telephone, comprising a mobile telephone body and a rotary wing, the rotary wing is pivotally connecting to the mobile telephone body by a rotating shaft, a fixing member hitched on the spindle and fixedly connected with the rotary wing of mobile telephone, a rotating member pivotally provided on the spindle and fixedly connected with the mobile telephone body.

Janninck teaches a rotary-wing type mobile telephone (see fig.2), comprising a mobile telephone body and a rotary wing (see fig.2), the rotary wing is pivotally connecting to the mobile telephone body by a rotating shaft (see fig.3, item 314), a fixing member hitched on the spindle and fixedly connected with the rotary wing of mobile telephone (see fig.3, item 310), a rotating member pivotally provided on the spindle and fixedly connected with the mobile telephone body (see fig.4, item 130).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 2, Lu teaches a rotating shaft of claim 1. Lu does not specifically disclose the rotary-wing type mobile telephone also includes a LCD screen provided on the outside or inside surface of the rotary wing.

Janninck teaches the rotary-wing type mobile telephone also includes a LCD screen provided on the outside or inside surface of the rotary wing (see fig.2, item 150).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 4, Lu teaches a rotating shaft comprises: a spindle provided at the center of the rotating shaft (see fig.2, item 70). Lu does not specifically disclose the lower end of the rotary wing of mobile telephone is provided with a first handset, and the upper end is provided with a second handset, the two handsets being connected electrically with a sound signal output device of the mobile telephone body, and the rotary-wing type mobile telephone also has a sound signal switching device which is provided between the sound signal output device, the first handset and the second handset, and switches the outputs sound signals to the first handset or the second handset according to the state of the rotary wing.

Janninck teaches the lower end of the rotary wing of mobile telephone is provided with a first handset (see fig.2, item 230), and the upper end is provided with a second handset (see fig.2, item 210), the two handsets being connected electrically with a sound signal output device of the mobile telephone body (see column 7, lines 43-46), and the rotary-wing type mobile telephone also has a sound signal switching device which is provided between the sound signal output device (see fig.1, item 160), the first handset and the second handset (see fig.2, items 210 and 230), and switches the outputs sound signals to the first handset or the second handset according to the state of the rotary wing (see fig.1, item 160).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 5, Lu teaches a rotating shaft of claim 1. Lu does not specifically disclose the outer profile of the rotary wing is smaller than that of the body, and the body is formed with a projection outside the closed profile of the rotary wing, the projection being flush with the rotary wing in a closed state and provided thereon with a plurality of functional keys, which keys can be used to operate the mobile telephone when the rotary wing is closed.

Janninck teaches the outer profile of the rotary wing is smaller than that of the body (see fig.2), and the body is formed with a projection outside the closed profile of the rotary wing, the projection being flush with the rotary wing in a closed state and provided thereon with a plurality of functional keys (see fig.2, item 230), which keys can be used to operate the mobile telephone when the rotary wing is closed (see fig.2, item 230).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 6, Lu teaches a rotating shaft of claim 1. Lu does not specifically disclose a first acute angle formed between the rotating shaft and the

horizontal datum plane of the mobile telephone, and an equal second acute angle respectively formed between the rotary wing and the rotating shaft and between the body and the rotating shaft, the first acute angle and the second acute angle being the complementary angles to each other, and the rotary wing which is rotated to open form an angle with the body based on the above-mentioned mounting structures.

Janninck teaches a first acute angle formed between the rotating shaft and the horizontal datum plane of the mobile telephone (see fig.2), and an equal second acute angle respectively formed between the rotary wing and the rotating shaft and between the body and the rotating shaft (also see fig.2), the first acute angle and the second acute angle being the complementary angles to each other, and the rotary wing which is rotated to open form an angle with the body based on the above-mentioned mounting structures (also see fig.2, the wing can be rotated in particular angle).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 11, Lu teaches the rotating shaft also comprises a locking member which is provided the side of the rotating member away from the fixing member and can lock the rotary wing of mobile telephone in a closed or opened position (see fig.2, item 13).

Regarding claim 13, Lu teaches a rotating shaft of claim 1. Lu does not specifically disclose the front shell of the mobile telephone body is provided with a

sunken positioning groove corresponding to the rotating shaft, the depth of the positioning groove being coinciding with the height of the rotating shaft, and the rotating shaft is provided in the positioning groove and fixes the rotating member to the positioning groove, and the back shell of the rotary wing of mobile telephone is fixed to the fixing member of the rotating shaft.

Janninck teaches the front shell of the mobile telephone body is provided with a sunken positioning groove corresponding to the rotating shaft (see fig.3, item 328), the depth of the positioning groove being coinciding with the height of the rotating shaft, and the rotating shaft is provided in the positioning groove and fixes the rotating member to the positioning groove, and the back shell of the rotary wing of mobile telephone is fixed to the fixing member of the rotating shaft (see fig.3, item 310).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 14, claim 14 is rejected with the similar reason as set forth in claim 1 above.

Regarding claim 15, claim 15 is rejected with the similar reason as set forth in claim 2 above.

Regarding claim 16, claim 16 is rejected with the similar reason as set forth in claim 2 above.

Regarding claim 17, Lu teaches setting the step of limiting and locking (see fig.2, items 11 and 27).

Lu does not specifically disclose the rotary wing form an angle with the body when the rotary wing is in the opening position.

Janninck teaches the rotary wing form an angle with the body when the rotary wing is in the opening position (see fig.2, the wing is rotated in each particular position).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

Regarding claim 18, claim 18 is rejected with the similar reason as set forth in claim 2 above.

Regarding claim 19, Lu teaches setting the step of limiting and locking (see fig.2, items 11 and 27). Lu does not specifically disclose a step of switching the working state of the handsets, to make the working states of the first handset and the second handset provided on the rotary wing of mobile telephone be self-switched when the rotary wing is switched between the opening position and the closed position.

Janninck teaches a step of switching the working state of the handsets, to make the working states of the first handset and the second handset provided on the rotary wing of mobile telephone be self-switched when the rotary wing is switched between the opening position and the closed position (see fig.1, item 160).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to provide the teaching of Janninck into the system of Lu in order to provide a wireless communication device having a unique factor to facilitate its portability and maximize its functionality (see Janninck, column 1, lines 10-13).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 6,666,422) in view of Janninck et al (US 6,766,182) further in view of Kobayashi (US 5,433,620).

Regarding claim 3 the combination of Lu and Janninck teaches a rotating shaft as claimed in claim 1. The combination of Lu and Janninck does not specifically disclose the spindle of the rotating shaft is hollow, through which passes an electrical connecting cable or a flexible printed board provided between the rotary wing and the body.

Kobayashi teaches the spindle of the rotating shaft is hollow, through which passes an electrical connecting cable or a flexible printed board provided between the rotary wing and the body (see column 6, line 62 to column 7, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Kobayashi into the system of Lu and Janninck so hat the flexible cable can be extended from the base unit into the display unit (see Kobayashi, Abstract).

***Allowable Subject Matter***

5. Claims 7-10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 7, the combination of Lu and Janninck teaches the spindle of the rotating shaft is formed at both ends thereof with a first positioning portion and at mid-section thereof with a rotary portion (see Lu, fig.2, item 10), the fixing member is hitched on the first positioning portion of the spindle; the rotating member is pivotally provided on the rotary portion of the spindle; the limit mechanism comprises a limit block provided on the fixing member and a rotatable limit component pivotally provided on the rotary portion of the spindle and provided with a radially protruding first protruding block (see Lu, fig.2, item 11).

The combination of Lu and Janninck fails to teach the rotating member is coupled to the rotatable limit component and leaves some rotating space, when the rotary wing drives the rotating member rotating, it further drives the rotatable limit component rotating, and when the first protruding block provided on the rotatable limit component is blocked by the limit block provided on the fixing member, the rotary wing has rotated through 180 degrees.

Regarding claim 12, the combination of Lu and Janninck teaches the rotary-wing type mobile telephone as claimed in claim 11. The combination of Lu and Janninck fails to teach the locking member comprises a self-locked positioning member and two elastic slices covered each other, the spindle is provided with a second positioning

portion, the self-locked positioning member and the two elastic slices are in turn provided at the side of the rotating member away from the fixing member and hitched on the second positioning portion of the spindle to be fixed to the spindle relatively, the self-locked positioning member is provided at the side opposite to the rotating member with two projections which are radially symmetrically arranged at 180 degrees, the corresponding side of the rotating member is provided with two grooves corresponding to the two projections.

### Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - a. Hemmi (US 6,650,547) teaches rotary structure for replaying signals.
  - b. Yang (US 6,883,206) teaches swivel hinge with angular fixing structure.
  - c. Liao (US 6,772,983) teaches pivot coupler pivotally connecting a monitor to a stand.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone

Art Unit: 2686

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

*(Signature)*  
06/06/05

*Marsha D Banks-Harold*  
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